

### Claims

What is claimed is:

1. A system for building a software system, the building system comprising:  
a first component for building a list of file names of published files to be shared by a plurality of build machines employed in building the software system;  
and  
a second component for distributing to one or more of the build machines one or more published files, identified in the list of file names, that are to be stored persistently by the one or more build machines.
2. The system of claim 1, wherein the first component, the second component and the one or more build machines execute on a single computer.
3. The system of claim 1, wherein the first component, the second component and the one or more build machines execute on a plurality of computers.
4. The system of claim 1, wherein each of the first component, the second component and the one or more build machines execute on separate computers.
5. A data packet adapted to transmit, from a first process to a second process, information relating to a list of file names of files to be shared by a plurality of build machines employed in building a software system.
6. A data packet adapted to transmit, from a first process to a second process, information relating to distributing one or more files being stored persistently by one or more build machines.
7. The system of claim 1, stored on a computer readable medium.

8. The system of claim 1, wherein the list of published file names of files is a list of pathnames.
9. The system of claim 1, wherein the second component initiates file transfers within the system for building a software system.
10. The system of claim 1, wherein one or more of the build machines initiates file transfers within the system for building a software system.
11. The system of claim 1, wherein a process other than the first component, the second component or the one or more build machines initiates file transfers within the system for building a software system.
12. The system of claim 1, wherein the first component builds a list of updates to files to be shared by the plurality of build machines and the second component distributes to one or more of the build machines updates to one or more files that are stored persistently by the one or more build machines.
13. The system of claim 1, further comprising a first data structure for storing the list of published file names.
14. The system of claim 13, wherein the data structure is a hash.
15. A system for building a software system employing a plurality of build machines, the building system comprising:
  - a component for broadcasting to one or more of the build machines one or more published build files that are stored persistently by a set of the one or more build machines; and
  - a component for selectively receiving and storing persistently one or more of the broadcast published build files.

16. The system of claim 15, wherein the component for broadcasting the one or more published build files and the one or more build machines execute on one computer.

17. The system of claim 15, wherein the component for broadcasting the one or more published build files and the one or more build machines execute on a plurality of computers.

18. The system of claim 15, wherein each of the components for broadcasting the one or more published build files and the one or more build machines execute on separate computers.

19. A method for building a software system comprising:  
collecting from one or more build machines, one or more file names  
corresponding to the one or more build files;  
determining which of the one or more build files the one or more  
buildmachines are to send to a post build machine;  
persistently storing the one or more build files on the one or more build  
machines;  
sending to the one or more build machines a list of file names of build  
files to be sent to the post build machine;  
sending the one or more build files to the post build machine;  
determining which of the one or more build files the one or more build  
machines are to receive from the post build machine;  
sending to the one or more build machines a list of file names of build  
files to be received from the post build machine;  
distributing one or more build files to the one or more build machines; and  
persistently storing the one or more build files distributed to the one or  
more build machines.

20. A computer-readable medium having computer-executable instructions for performing the method recited in claim 19.

21. A method for building a software system comprising:  
collecting one or more build files from one or more build machines; and  
distributing the one or more build files to the one or more build machines.

22. The method of claim 21, wherein distributing the one or more build files further comprises:  
broadcasting the one or more build files to the one or more build machines.

23. The method of claim 22, wherein collecting the one or more build files from the one or more build machines further comprises:  
determining which of the broadcast build files to store persistently; and  
persistently storing one or more of the broadcast files.

24. A computer-readable medium having computer-executable instructions for performing the method recited in claim 23.

25. A system for building a software system comprising:

- means for collecting from one or more build machines, one or more file names corresponding to the one or more build files;
- means for determining which of the one or more build files the one or more build machines are to send to a post build machine;
- means for sending the one or more build files to the post build machine;
- means for determining which of the one or more build files the one or more build machines are to receive from the post build machine;
- means for sending to the one or more build machines a list of file names of build files to be sent to the one or more build machines and the build files to be received from the one or more build machines; and
- means for distributing one or more build files to the one or more build machines.

26. A build machine, comprising:

- a first component for building one or more build files,
- a second component for creating a first list of file names of build files, and for transmitting the first list of file names to a build manager,
- a third component for receiving a second list of file names of build files, where the second list of file names identifies files to transmit to a post build machine, and wherein the third component transmits the build files identified in the second list of file names to the post build machine,
- a fourth component for receiving one or more build files transmitted to the build machine by the post build machine; and
- a fifth component for persistently storing one or more build files.

27. The build machine of claim 26, wherein the build machine further operates as a post build machine, comprising:

a first component for receiving one or more build files to be transmitted to one or more build machines; and

a second component for transmitting at least a subset of the one or more build files to the one or more build machines.

28. A post build machine, comprising:

a first component for receiving one or more build files to be transmitted to one or more build machines; and

a second component for transmitting at least a subset of the one or more build files to the one or more build machines.

29. A build manager, comprising:

a first component for receiving one or more first lists of file names built by one or more build machines;

a second component for generating one or more second lists of file names of files to be transmitted by one or more build machines to a post build machine, and for transmitting the one or more second lists of file names to the one or more build machines; and,

a third component for generating one or more third lists of file names of files to be received by one or more build machines from the post build machine, wherein the one or more files identified in the one or more third lists of file names are to be stored persistently by one or more build machines, and for transmitting the one or more third lists to one or more build machines.

30. A build machine, comprising:
- a first component for building one or more build files,
  - a second component for determining which of the one or more build files to broadcast to one or more build machines,
  - a third component for receiving one or more build files transmitted to the build machine by one or more build machines;
  - a fourth component for selecting which of the one or more received build files to store persistently; and,
  - a fifth component for storing persistently the one or more received build files selected by the fourth component to be stored persistently.
31. A data structure that is storable on a computer readable medium or transmittable over a communication medium, comprising:
- (a) a first data field containing first data representing one or more file names, transmitted to a build manager, the file names identifying one or more build files; and
  - (b) a second data field containing second data representing a subset of the one or more file names of the one or more build files to be transmitted to a post build machine, the second data derived from the first data by determining which of the one or more build files of the first data are to be employed by and stored persistently by one or more build machines employed in building a software system.

32. A computer-readable medium having computer-executable components comprising:

(a) a build machine for:

(i) building one or more build files;

(ii) transmitting a first list of one or more file names of the one or more build files to a build manager;

(iii) receiving a second list of one or more file names of one or more build files to transmit to a post build machine;

(iv) transmitting to the post build machine the one or more build files identified in the second list;

(v) receiving a third list of one or more file names of one or more build files to receive from a post build machine and to store persistently;

(vi) receiving the one or more build files identified in the third list from the post build machine; and

(vii) storing persistently the one or more build files received from the post build machine.

33. The computer-readable medium of claim 31, further comprising:

(a) a build manager for:

(i) receiving one or more first list of file names of build files from one or more build machines;

(ii) generating one or more second lists of file names of build files; and

(iii) transmitting the one or more second lists of file names of build files to one or more build machines.



34. The computer-readable medium of claim 33, further comprising:
  - (a) a post build machine for:
    - (i) receiving one or more build files from one or more build machines;
    - (ii) transmitting one or more build files to the one or more build machines.
35. The computer-readable medium of claim 33, further comprising:
  - (a) a post build machine for:
    - (i) building one or more build files;
    - (ii) receiving one or more build files from one or more build machines;
    - (iii) transmitting one or more build files to the one or more build machines.